

**Abstract**

A method for operating a servo system having a first member and a second member that is positionable relative to said first member in response to position signals. The 5 position signals are generated to cause said second member to be positioned at a desired location relative to the first member. In the position signal, a position error due to a disturbance in the servo system is reduced by non-linear attenuation. Reducing the position error is 10 performed by selectively adjusting the disturbance signal as a non-linear function of the magnitude of the disturbance signal. Accordingly, attenuation of the disturbance signal increases as a non-linear function of the magnitude of the disturbance signal.